Citizens Weather Observing Program (CWOP)
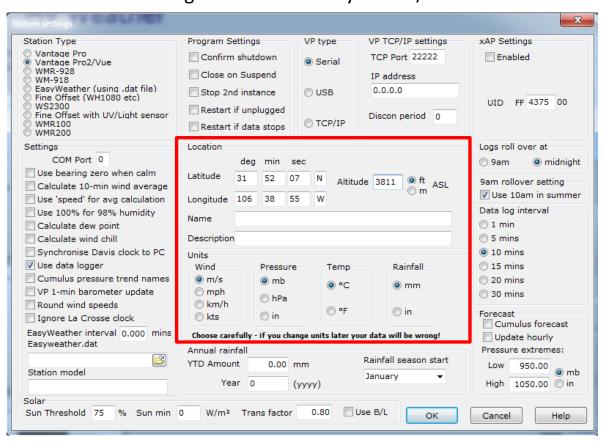## Configuration for *Cumulus* **Software** Users
(Last updated: 10 July 2012)

These instructions assume you already have setup Cumulus either for home use, or to upload data to another server (e.g., Weather Underground).

1.) Gather Station Location Data

- You will need your Latitude and Longitude in decimal degrees, and Elevation in metres. You may already have this information setup in Cumulus, but latitude will be in Degrees/Minutes/Seconds format. However, this can easily be converted. In Cumulus go to the 'Configuration' drop-down menu, then click on "Station Settings." Make note of your Lat/Lon and Elevation.

If you do not know your lat/lon and elevation, please see the How-To "Signing up for CWOP" for methods to obtain your station location data: www.srh.noaa.gov/media/epz/mesonet/CWOP-SignUp.pdf

2.) Re-calculate Lat/Lon

- A useful page for converting lat/lon from decimal degrees to other formats can be found here: http://www.directionsmag.com/site/latlong-converter

• Enter your Latitude in the proper "Deg, Min, Sec" fields, then click the 'Convert' button.

Latitude / Longitude Conversion
This page can be used to convert latitude and longitude coordinates.

Deg: 106   Min: 38   Sec: 55   [Convert]

Degrees: ____   Minutes.M: ____   [Convert]

Decimal Degrees: ____   [Convert]

DMS 106 38 55
DM.m 106 38.916666666667
D.d 106.64861111111111

• Your Latitude will be converted to decimal degrees next to the "DM.m" in the greenish-text box. Make a note of it.
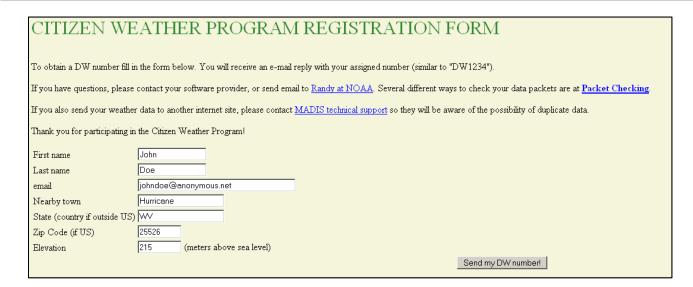
• Next, do the same for longitude.

3.) Get a CWOP Station ID:

   With any web browser, fill out the form at:
   http://www.findu.com/citizenweather/cw_form.html

CWOP will require your station elevation in meters. You can convert elevation from feet to meters by multiplying your elevation in feet by 0.3048.

> The CWOP website is a little "old-fashioned" and unpolished, and it contains far more information than the average user needs. Don't worry about the parts of the form mentioning "Packet Checking" and "MADIS tech support."

CITIZEN WEATHER PROGRAM REGISTRATION FORM

To obtain a DW number fill in the form below. You will receive an e-mail reply with your assigned number (similar to "DW1234").

If you have questions, please contact your software provider, or send email to Randy at NOAA. Several different ways to check your data packets are at Packet Checking.

If you also send your weather data to another internet site, please contact MADIS technical support so they will be aware of the possibility of duplicate data.

Thank you for participating in the Citizen Weather Program!

First name: John
Last name: Doe
email: johndoe@anonymous.net
Nearby town: Hurricane
State (country if outside US): WV
Zip Code (if US): 25526
Elevation: 215   (meters above sea level)

[Send my DW number!]

• Make sure you use a valid email address (don't worry – no SPAM).

• If you are a business or agency, you may wish to use its name in place of "First Name" and "Last Name." Otherwise, use whoever will be the primary contact.

• If you need help with any of these steps, or finding your location or elevation, send an email to: *mike.hardiman@noaa.gov*.
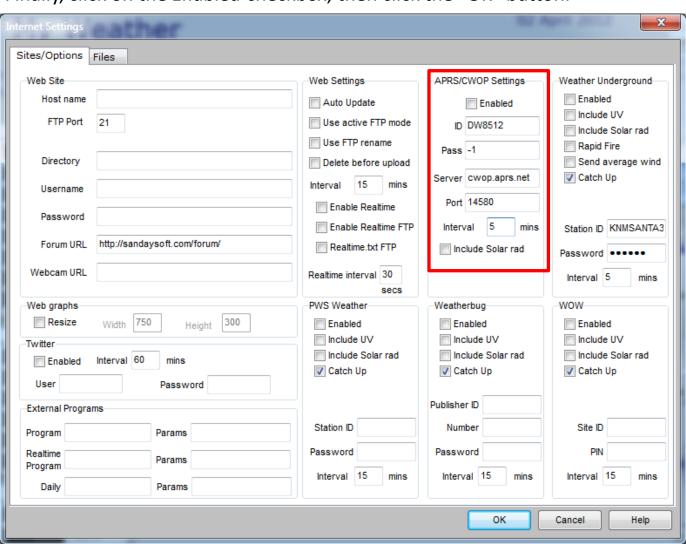
4.) Send the form, then make note of your CWOP Station ID:

> **Your Citizen's Weather Account Number is: DWxxxx**
>
> An email will be sent to John Doe (johndoe@anonymous.net) confirming this number.

5.) Configure Cumulus

• In Cumulus, click on the 'Configuration' tab, then click "Internet." This will bring up the Internet Settings dialog.

• In the section labeled "APRS/CWOP Settings" … enter your CWOP ID in the *ID* field. This will cause some other fields to automatically populate. Leave *Pass* as -1, leave *Server* as 'cwop.aprs.net', leave *Port* as 14580, and set the *Interval* to 5 minutes. Click on the *Include Solar rad* checkbox only if you have a solar radiation sensor on your weather station.

• Finally, click on the *Enabled* checkbox, then click the "OK" button.

6.) Check for Data:

- Browse to the following web address, using your CWOP Station ID at the end:
  http://www.findu.com/cgi-bin/wx.cgi?call=DWxxxx

- For example, if your Station ID was CW0958, you would enter:
  http://www.findu.com/cgi-bin/wx.cgi?call=CW0958

Note: It may take up to 15 minutes for data to start appearing.
Also Note: The date/time stamp used on the above site is in the form YYYYMMDDhhmmss in UTC time. For example "20120402145210" means April 2, 2012 at 14:52 UTC (and 10 seconds).

7.) Normal Operations.

- Make sure you keep Cumulus running at all times to send data.

8.) MesoWest/MADIS Updates:

- These two data aggregators usually update their station tables on a weekly basis (usually Wednesdays). After several days, data from your station should begin showing up on plots at MesoWest:

http://mesowest.utah.edu/cgi-bin/droman/mesomap.cgi?state=NM&rawsflag=3